

U.S. Patent Application Serial No. **09/664,332**
Amendment filed December 27, 2004
Reply to OA dated October 25, 2004

REMARKS

Claims 1-3, 6-10, 12, 17-19 and 21-28 are pending in this application. In Applicant's understanding, claims 9, 17-19, 21 and 23-26 are withdrawn from consideration. No amendment is made in this Response. This Response is made further to the Response under 37 CFR 1.116, filed on August 19, 2004. It is believed that the concurrently filed Request for Continued Examination is fully responsive to the Office Action dated **May 28, 2004**.

Regarding claim listing in the Advisory action

The Advisory action indicates that claims 1-3, 6-8, 10, 12, 22, 27 and 28 are rejected, and that claims 8, 7-19, 21 and 23-36 are withdrawn from consideration. Applicant believes that the list of withdrawn claims is incorrect, and should read "9, 17-19, 21 and 23-26".

Regarding Telephone Conversation with the Examiner on November 17, 2004

Applicant's agent, Daniel Geselowitz, contacted Examiner Sellers on November 17, 2004, to request a personal interview. The Examiner could not grant a personal interview at that time since the application was under a final Office action. Applicant's agent indicated to the Examiner that Applicant desired to present additional data, and the Examiner stated that this would have to be presented in a Request for Continued Examination.

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Presentation of Additional Data

In addition to the remarks presented in the Response dated August 19, 2004, Applicant here presents a Declaration under 37 CFR 1.132, signed by Noriya HAYASHI, presenting experimental data relevant to the rejections.

Applicant notes that in the Advisory action dated August 27, 2004, the Examiner states in point no. 5 that:

“The claims are directed to a composition [...] “which **makes it possible** to cure by chain reaction said photopolymerization resin component with irradiation of an energy ray [...] Based on the irradiation curing of the equivalent components in the patents, the prior art curing is also possibly cured by chain reaction.”

In response, Applicant argues that the “chain curing” or “curing by chain reaction” of the present invention is completely different from the curing process in the prior art. In the conventional reactions, in the dark reactions, the reaction requires hours or days to proceed, that is, it proceeds at a very low rate, and does not reach the deep portion of a thick plate.

By contrast, in the present reaction, once a UV light is irradiated on the material to be cured, even if the UV light is quickly turned off, the reaction will proceed right down to the bottom portion of a thick plate. Applicant desires to demonstrate this process using a video (mpeg file) in a future interview with the Examiner.

The attached Declaration under 37 CFR 1.132 presents data in which the compound ratio of maleic anhydride is varied. These data demonstrate that the chain curing **does not occur** at conventional ratios of maleic anhydride outside of the claimed range.

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Specifically, in Test I, the ratio of maleic anhydride to the resin component is 0.65, within the claimed range of 0.3 to 1.4. In Tests II, III and VI, it is 0, 0.01, and 2.5, respectfully, all outside the claimed range. **Chain curing occurs only in Test I**, and not in Tests II, III and VI.

That is, in response to the rejection under 35 U.S.C. 103(a) over Hamazu et al. '017, Buchwalter et al. '859, Starkey '339, Green '592 and Green et al. '938, Applicant asserts that none of the references discloses, either explicitly or inherently, a composition meeting the claim limitations, in which curing by chain reaction will occur. Since none of the references mentions chain curing, none of the references suggests optimizing concentrations so as to allow chain curing. Therefore, even if a combination of the references might include the claimed ratio of "0.3 to 1.4 mol [of curing agent] per mol of said photopolymerizable resin component", as recited in claim 1, the curing resulting from this limitation represents an "**unexpected result**" over the references.

Applicant therefore asserts that claims 1-3, 6-8, 10, 12, 22, 27 and 28, are not anticipated by and are non-obvious over Hamazu et al. '017, Buchwalter et al. '859, Starkey '339, Green '592 and Green et al. '938, taken separately or in combination.

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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Declaration under 37 CFR 1.132

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